

APPENDIXES

20142°—20—28

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APPENDIX I

SAMPLE WORK SHEET ILLUSTRATIVE OF PROCEDURE IN ESTIMATION OF AMOUNTS OF PER CAPITA EARNINGS, FOR ALL INDUSTRIES COMBINED: 1899-1927¹

[The figures in column D are derived from those in the two columns preceding in the following manner: The average weekly earnings (reported in Census Bulletin 93) for all manufacturing wage earners in the busiest week of 1904 were \$10.06. This figure represents actual earnings; it is next, therefore, divided by an estimated ratio of actual to full employment (computed as explained in Chapter XV and XVI) in order to produce an estimate of full-time weekly earnings. This ratio, for all manufacturing industries, all sex and age groups combined, is 0.870. The resulting full-time weekly earnings estimate for 1904 is \$11.56, which becomes the 1904 figure for column D. The corresponding estimates for the other years are obtained by applying to the 1904 figure the index numbers of column B. The whole process of arriving at the estimates in column D is described in Chapter XIV of this monograph.]

YEAR	Estimated indexes of average wages ¹	Census average wage (inter-censal years interpolated)	Relatives of per capita full-time money earnings		Estimated full-time weekly earnings ²	Estimated "full-time yearly earnings" annual wages rates	Purchasing power of annual wage rates at 1914 price level	Actual per capita earnings (nominal)	Real earnings per capita (at 1914 price level)	Cost of living index 1910=100	Estimated ratio actual to full employment
			A	B								D	I	J	N	P	H	M
			1904=1.000	1914=1.00							
1899	1.000	\$428	0.890	0.73	\$10.29	\$525	\$710	\$446	\$603	0.74	0.849
1900	1.032	440	.922	.76	10.66	544	716	449	591	.76	.825
1901	1.050	447	.937	.77	10.83	552	708	471	604	.78	.854
1902	1.074	458	.960	.70	11.10	566	708	497	621	.80	.878
1903	1.102	469	.983	.81	11.36	579	780	498	693	.84	.890
1904	1.000	477	1.000	.82	11.56	590	711	483	682	.83	.819
1905	1.020	487	1.021	.84	11.80	602	725	536	646	.83	.891
1906	1.060	506	1.061	.87	12.27	626	728	568	600	.86	.908
1907	1.102	526	1.103	.90	12.75	650	714	579	636	.91	.891
1908	1.091	520	1.090	.89	12.60	643	739	496	570	.87	.772
1909	1.000	518	1.090	.89	12.60	643	739	557	640	.87	.866
1910	1.021	529	1.109	.91	12.82	654	711	559	608	.92	.854
1911	1.034	536	1.124	.92	12.99	662	697	594	562	.95	.807
1912	1.070	554	1.161	.95	13.42	684	713	592	617	.96	.866
1913	1.112	576	1.208	.99	13.96	712	719	617	623	.99	.866
1914	1.000	580	1.220	1.00	14.10	719	719	576	576	1.00	.801
1915	1.021	592	1.241	1.02	14.35	732	747	608	620	.98	.831
1916	1.179	694	1.434	1.18	16.58	846	791	768	718	1.07	.908
1917	1.367	793	1.662	1.36	19.21	950	760	860	697	1.29	.878
1918	1.791	1,039	2.178	1.79	25.18	1,284	818	1,104	703	1.57	.860
1919	1.000	1,158	2.430	1.99	28.09	1,433	801	1,212	677	1.79	.846
1920	1.203	1,303	2.920	2.39	33.76	1,722	840	1,488	726	2.05	.864
1921	1.000	1,180	2.480	2.04	28.67	1,462	831	1,047	592	1.78	.716
1922	.976	1,152	2.415	1.98	27.92	1,424	858	1,171	705	1.66	.822
1923	1.000	1,207	2.656	2.18	30.70	1,566	927	1,317	839	1.69	.905
1924	.996	1,262	2.646	2.17	30.59	1,560	923	1,310	776	1.69	.840
1925	1.000	1,280	2.698	2.21	31.02	1,582	931	1,402	825	1.70	.886
1926	1.017	1,302	2.730	2.24	31.54	1,610	931	1,436	830	1.73	.892
1927	1.019	1,304	2.734	2.25	31.61	1,612	943	1,373	805	1.71	.852

¹ Derivation, data for intercensal years: 1900-1913, relatives of Massachusetts figures on average yearly earnings; 1915-1923, U. S. Bureau of Labor Statistics link relatives of per capita earnings, as obtained by Federal Reserve Bank of New York, averaged with corresponding relatives for New York, Massachusetts (yearly), and Wisconsin, 1924-25, same as for period 1915-1923, except that the U. S. Bureau of Labor Statistics expanded reports on pay rolls and employment are used in place of the link relatives of per capita earnings, the bureau's indexes of pay-roll totals being divided by its indexes of employment for an index of per capita earnings; 1926-27, the indexes given rest entirely upon Federal data, being the quotients obtained by dividing the U. S. Bureau of Labor Statistics indexes of pay roll by its indexes of employment. This first column is in no way involved in the calculation of results for census years.

² See headnote.

APPENDIX II

SAMPLE WORK SHEET ILLUSTRATIVE OF PROCESS OF CALCULATING RELATIVES
OF PER CAPITA EARNINGS, FOR ALL INDUSTRIES COMBINED: 1899-1927

YEAR	Estimated relatives of average wages	Census average wage pay- ments (inter- censal years interpo- lated)	Rela- tives on 1914 base (in- dices of "full- time money earn- ings" per capita)	Rela- tives, pur- chasing power of "full- time money earn- ings"	Rela- tives of actual money earn- ings	Rela- tives of pur- chasing power of actual money earn- ings	Year to year per cent of change in real earnings	Cost of living index	Index of employ- ment (from Table 146)	Same, on 1914 base
		A	IX	K	O	Q	PX	H		L
1899	1.000	\$426	73	99	77	105		0.74	1.003	1.06
1900	1.032	440	76	99	78	103	-2.0	.76	.975	1.03
1901	1.050	447	77	98	82	105	2.2	.78	1.010	1.07
1902	1.074	458	79	98	80	108	2.8	.80	1.038	1.10
1903	1.102	469	81	96	86	103	-4.5	.84	1.017	1.07
1904	1.000	477	82	99	84	101	-1.9	.88	.968	1.02
1905	1.020	487	84	101	93	112	11.0	.83	1.052	1.11
1906	1.060	506	87	101	99	115	2.2	.86	1.073	1.13
1907	1.102	526	90	99	101	110	-3.6	.91	1.052	1.11
1908	1.091	520	89	103	86	99	-10.4	.87	.912	.96
1909	1.000	518	89	103	97	111	12.3	.87	1.024	1.08
1910	1.021	529	91	99	97	106	-5.0	.92	1.010	1.07
1911	1.034	536	92	97	93	98	-7.6	.95	.964	1.01
1912	1.070	554	95	99	103	107	9.8	.96	1.024	1.08
1913	1.112	576	96	100	107	108	1.0	.99	1.024	1.08
1914	1.000	580	100	100	100	100	-7.5	1.00	.947	1.00
1915	1.021	592	102	104	106	108	7.6	.98	.982	1.04
1916	1.179	684	118	110	133	125	15.8	1.07	1.073	1.13
1917	1.367	793	138	106	149	116	-7.1	1.29	1.038	1.10
1918	1.791	1,039	179	114	192	122	5.4	1.57	1.017	1.07
1919	1.000	1,158	199	111	210	118	-3.7	1.79	1.000	1.06
1920	1.203	1,393	239	117	258	126	7.2	2.05	1.021	1.08
1921	1.000	1,180	204	116	182	103	-13.0	1.76	.846	.89
1922	.976	1,152	198	119	203	122	18.5	1.66	.972	1.03
1923	1.000	1,267	218	129	229	146	+17.0	1.69	1.070	1.130
1924	.996	1,292	217	128	227	135	-7.5	1.69	.993	1.049
1925	1.000	1,280	220	130	243	143	+6.0	1.70	1.049	1.109
1926	1.017	1,302	224	130	240	144	+1.0	1.73	1.056	1.115
1927	1.019	1,304	224	131	238	140	-2.5	1.71	1.007	1.063

APPENDIX III

SECTIONS OF MANUFACTURES CENSUS SCHEDULES RELATING TO WAGES AND LABOR

1899

5. Persons employed (see instruction 5):

CLASSES	Greatest number employed at any one time during the year	Least number employed at any one time during the year	Total amount paid in wages or salaries during the year
Proprietors and firm members:			
Men.....			\$.....
Women.....			\$.....
Salaried officers of corporations			\$.....
General superintendents, managers, clerks, and salesmen:			
Men.....			\$.....
Women.....			\$.....
All other employees, including pieceworkers:			
Men, 16 years and over.....			\$.....
Women, 16 years and over.....			\$.....
Children, under 16 years.....			\$.....
TOTAL.....			\$.....

AVERAGE NUMBER EMPLOYED DURING EACH MONTH

(Wage earners only, including pieceworkers. Do not include proprietors, firm members, officers, superintendents, managers, clerks, or salesmen)

MONTH	Men, 16 years and over	Women, 16 years and over	Children, under 16 years
January.....			
February.....			
March.....			
April.....			
May.....			
June.....			
July.....			
August.....			
September.....			
October.....			
November.....			
December.....			

6. Months in operation:

On full time, -----; on three-fourths time, -----; on half time, -----; on one-fourth time, -----; idle, -----.

1905 (1904)

5. Salaried employees:	Number	Total amount paid in salaries during the year
Salaried officers of corporations.....		\$.....
Superintendents, managers, foremen, clerks, and other salaried employees:		
Men.....		\$.....
Women.....		\$.....
TOTAL.....		\$.....

6. Wage earners, including pieceworkers: Do not include salaried employees reported above.	Greatest number employed at any one time during the year	Least number employed at any one time during the year	Total amount paid in wages during the year
Men 16 years and over.....			\$.....
Women 16 years and over.....			\$.....
Children under 16 years.....			\$.....
TOTAL.....			\$.....

Salaries and wages should include board or rent furnished as part compensation. Foremen receiving wages and performing work similar to that of the men over whom they have charge are to be reported as wage earners. If books do not show the separate amount of wages paid to men, women, and children, apportion the total wages for the year upon the basis of an average pay roll. Amounts paid for contract work, if not done by the regular employees, must not be included here, but reported in answer to Inquiry 8.

7. Average number of wage earners, including pieceworkers, employed during each month:

Do not include proprietors and firm members, or salaried officers, superintendents, managers, foremen, or clerks.

MONTH	Men 16 years and over	Women 16 years and over	Children under 16 years	MONTH	Men 16 years and over	Women 16 years and over	Children under 16 years
January.....				July.....			
February.....				August.....			
March.....				September.....			
April.....				October.....			
May.....				November.....			
June.....				December.....			

11. Classified earnings of wage earners, including pieceworkers, for the week during which the largest number of persons was employed:

For week ending....., 1904. Distribute employees according to actual earnings (not rates) for one week only. If period of payment includes two weeks, or any time other than one week, reduce the pay roll to a weekly basis before entering the figures for this inquiry. Do not include proprietors, firm members, officials, superintendents, managers, foremen, or clerks.

EARNINGS PER WEEK	Total	Men 16 years and over, number	Women 16 years and over, number	Children under 16 years, number
Under \$3 per week.....				
\$3 and over, but under \$4.....				
\$4 and over, but under \$5.....				
\$5 and over, but under \$6.....				
\$6 and over, but under \$7.....				
\$7 and over, but under \$8.....				
\$8 and over, but under \$9.....				
\$9 and over, but under \$10.....				
\$10 and over, but under \$12.....				
\$12 and over, but under \$15.....				
\$15 and over, but under \$20.....				
\$20 and over, but under \$25.....				
\$25 and over.....				
Total number.....				
Total wages for the week.....	\$.....	\$.....	\$.....	\$.....

12. Time the factory was in operation:

Number of days in operation during the year.....
 Number of hours per day (under normal conditions).....
 Number of hours per week (under normal conditions).....
 Extra time during the year, total number of hours.....

1909

2. Time in operation and hours worked:

NUMBER OF DAYS IN OPERATION DURING THE YEAR.....
 Give the number of days the plant, or any part of it, was in operation during the year. Days when the establishment was shut down for repairs, or for other causes, and there was no production should not be included. Do not include Sundays and holidays, unless plant was in actual operation.

NUMBER OF HOURS NORMALLY WORKED BY WAGE EARNERS: (a) PER SHIFT (b) PER WEEK

Give the prevailing practice followed during the year, without attempting to indicate variations from this practice. All that it is desired to know is the practice generally prevailing in respect to the hours of labor of employees.

4. Salaried employees: Number, December 15, 1909, as per pay roll.

If data are not obtainable for that day or month, give the data for nearest representative or normal day, and state day and month here

	Men	Women
Salaried officers of corporations.....
Superintendents and managers.....
Clerks, stenographers, salesmen, and other salaried employees.....
Total.....

5. Wage earners, including pieceworkers: Number, December 15, 1909, as per pay roll.

If data are not obtainable for that day or month, give data for same day as for Inquiry 4. Include overseers and foremen receiving wages and performing work similar to men over whom they have charge; those whose duties are wholly supervisory should be reported under second item of Inquiry 4.

	Men	Women
16 years of age and over.....
Under 16 years of age.....
Total.....

6. Wage earners, including pieceworkers. Number, as per pay rolls or time records on fifteenth day of each month of the period covered by this report.

If data are not obtainable for that day, give data for nearest representative day.

MONTH	NUMBER	MONTH	NUMBER	MONTH	NUMBER	MONTH	NUMBER
January.....	April.....	.....	July.....	.....	October.....	.....
February.....	May.....	.....	August.....	.....	November.....	.....
March.....	June.....	.....	September.....	.....	December.....	.....

7. Salary and wage payments: Total amounts paid in salaries and wages during the year covered by this report.

Do not include amount paid for contract work, if not done by the regular employees, as the amount paid for such work should be reported under Inquiry 9.

Salaried officers of corporations.....	\$.....
Superintendents and managers.....	\$.....
Clerks, stenographers, salesmen, and other salaried employees.....	\$.....
Wage-earners, including pieceworkers.....	\$.....
See note to Inquiry 5 as to overseers and foremen.	\$.....
Total.....	\$.....

1914

3. Salaried employees: Number, December 15, 1914, as per pay roll:

If this is not a representative day, or if data are not obtainable for it, give the data for nearest representative or normal day, and state day and month here.....

	Male	Female
Salaried officers of corporations.....
Superintendents and managers.....
Clerks, stenographers, salesmen, and other salaried employees.....
Total.....

4. Wage earners, including pieceworkers: Number, December 15, 1914, as per pay roll:

If this is not a representative day, give data for same day as for Inquiry 3. Include overseers and foremen receiving wages and performing work similar to those over whom they have charge; those whose duties are wholly supervisory should be reported under second item of Inquiry 3.

	Male	Female
16 years of age and over.....
Under 16 years of age.....
Total.....

5. Wage earners, including pieceworkers: Number, as per pay rolls or time records on fifteenth day of each month of the period covered by this report:

If data are not obtainable for that day, give data for nearest representative day.

MONTH	Number	MONTH	Number	MONTH	Number	MONTH	Number
January.....	April.....	.....	July.....	.....	October.....	.....
February.....	May.....	.....	August.....	.....	November.....	.....
March.....	June.....	.....	September.....	.....	December.....	.....

6. Total amounts paid in salaries and wages during the year covered by this report:

Salaried officers of corporations	\$.....
Superintendents and managers.....	\$.....
Clerks, stenographers, salesmen, and other salaried employees.....	\$.....
Wage earners, including pieceworkers.....	\$.....
(See note to Inquiry 4 as to overseers and foremen.)	
Total.....	\$.....

Amount paid for contract work not done by the regular employees... \$.....

7. Time in operation and hours worked:

NUMBER OF DAYS IN OPERATION DURING THE YEAR.....
 Give the number of days the plant, or any part of it, was in operation during the year. Days when the establishment was shut down for repairs, or for other causes, and there was no production should not be included. Do not include Sundays and holidays unless plant was in actual operation.

NUMBER OF HOURS NORMALLY WORKED BY WAGE EARNERS: (a) PER SHIFT..... (b) PER WEEK.....
 Give the prevailing practice followed during the year, without attempting to indicate variations from this practice. All that it is desired to know is the practice generally prevailing in respect to the hours of labor of employees.

1919

3. Salaried employees: Number, December 15, 1919, as per pay roll:

If this is not a representative day, or if data are not obtainable for it, give the data for nearest representative or normal day, and state day and month here

	Male	Female
Salaried officers of corporations.....
Superintendents, managers, and assistants.....
Clerks, stenographers, salesmen, etc.....
Total.....

4. Wage earners, including pieceworkers: Number, December 15, 1919, as per pay roll:

If this is not a representative day, give data for same day as for Inquiry 3. Include overseers and foreman performing work similar to those over whom they have charge; those whose duties are wholly supervisory should be reported under second item of Inquiry 3. The number of persons working at their homes is not to be reported. The amount paid for such work, however, should be reported as "Amount paid for contract work, not done by the regular employees" and not under "Wage earners, including pieceworkers."

	Male	Female
16 years of age and over.....
Under 16 years of age.....
Total.....

5. Wage earners, including pieceworkers: Number, as per pay rolls or time records on fifteenth day of each month of the period covered by this report: If data are not obtainable for that day, give data for nearest representative day.

MONTH	NUMBER		MONTH	NUMBER		MONTH	NUMBER		MONTH	NUMBER	
	Male	Female		Male	Female		Male	Female		Male	Female
January			April			July			October		
February			May			August			November		
March			June			September			December		

6. Total amounts paid in salaries and wages during the year covered by this report:

Salaried officers of corporation	\$
Superintendents, managers, and assistants	\$
Clerks, stenographers, salesmen, etc.	\$
Wage earners, including pieceworkers	\$
(See note to Inquiry 4 as to overseers and foremen.)	
Total	\$

Amount paid for contract work not done by the regular employees \$

7. Time in operation and hours worked:

NUMBER OF DAYS IN OPERATION DURING THE YEAR
 Give the number of days the plant, or any part of it, was in operation during the year. Days when shut down for repairs, or for other causes, and there was no production should not be included. Do not include Sundays and holidays, unless plant was in actual operation.

NUMBER OF HOURS NORMALLY WORKED BY WAGE EARNERS: (a) PER SHIFT (b) PER WEEK
 Give the prevailing practice followed during the year, without attempting to indicate variations from this practice. All that it is desired to know is the practice prevailing in respect to the hours of labor of employees.

1921

2. Persons engaged:

a. Proprietors or firm members	number				
b. Officers, managers, clerks, and other salaried employees on December 15, or nearest representative day					
c. Wage earners, including piece workers, employed on the 15th day of each month, or nearest representative day, in the establishment here reported (do not include persons reported under items a and b):					
Jan	Mar	May	July	Sept	Nov
Feb	Apr	June	Aug	Oct	Dec

3. Salary and wage payments:

a. Total amount of salaries for period covered by this report	\$
(Refers to Inquiry 2, item b, only.)	
b. Total amount of wages for period covered by this report	\$
(Refers to Inquiry 2, item c, only.)	
c. Contract work (amount paid for such work not done by the employees of the establishment here reported)	\$

4. Time in operation:

a. Number of days the factory was operated during the year	(per week)
b. Number of hours normally worked by wage earners (per shift)	

1923

3. Time in operation:

- a. Number of days the factory was operated during the year.....
- b. Number of hours normally worked by wage earners (per shift)..... (per week)

4. Persons engaged:

Number

- a. Proprietors or firm members (not applicable to incorporated companies).....
- b. Salaried employees.—Include salaried officers of corporations, superintendents, managers, clerks, and all other salaried employees on December 15, or nearest representative day.....
- c. Wage earners, including piece workers, number employed on the 15th day of each month, or nearest representative day, in the establishment reported (do not include those reported under items 4 a and 4 b):
- | | | | | | |
|-----------|----------|-----------|----------|----------|-----------|
| Jan..... | Feb..... | Mar..... | Apr..... | May..... | June..... |
| July..... | Aug..... | Sept..... | Oct..... | Nov..... | Dec..... |

5. Salaries, wages, and materials:

(Do not duplicate any expense under items a, b, c, and d.)

- a. SALARIES.—Total amount paid for the period covered by this report (refers to Inquiry 4, item b, only)..... \$.....
- b. WAGES.—Total amount paid for the period covered by this report (refers to Inquiry 4, item c, only)..... \$.....

1925

3. Time in operation:

- a. Number of days the plant was operated during the year.....
- b. Number of hours normally worked by wage earners (per shift)..... (per week)

4. Persons engaged:

Number

Do not report any person under more than one of items a, b, and c.

- a. Proprietor or firm members (not applicable to incorporated companies).....
- b. Salaried employees.—Report the number of salaried officers of corporations, superintendents, managers, auditors, bookkeepers, collectors, clerks, and other supervisory and clerical employees on the pay roll on December 15, or nearest representative day.....
- c. Wage earners, including pieceworkers.—Report the number of all skilled and unskilled laborers, such as mechanics, machine operatives, assemblers, packers, etc., including pieceworkers, actually employed in the manufacturing operations of the establishment on the 15th day of each month or nearest representative day:
- | | | | | | |
|-----------|----------|-----------|----------|----------|-----------|
| Jan..... | Feb..... | Mar..... | Apr..... | May..... | June..... |
| July..... | Aug..... | Sept..... | Oct..... | Nov..... | Dec..... |

5. Salaries, wages, and materials:

Report only the specified expenses; overhead, capital, and miscellaneous expenses should not be included. Do not report any class of expenses under more than one of items a, b, c, and d.

- a. SALARIES.—Report the total amount paid to the salaried employees shown above (Inquiry 4, item b) during the period covered by this report..... \$.....
- b. WAGES.—Report the total amount paid to the wage earners shown above (Inquiry 4, item c) during the period covered by this report..... \$.....

APPENDIX IV

LIST OF SOURCES USED OR CITED

A. OFFICIAL

FEDERAL STATISTICS

BUREAU OF THE CENSUS:

- Census of Manufactures.* Quinquennial censuses of 1899, 1904, 1909, 1914, and 1919; biennial censuses of 1921, 1923, and 1925.
- Census of Population.* Decennial censuses of 1900, 1910, and 1920.
- Census of Manufactures.* Selected establishment schedules, returned in 1919 census of manufactures. (In the archives of the Bureau of the Census.)
- Earnings of wage earners, 1905.* Census Bulletin No. 93. (Also published as Part IV of the census of manufactures for 1905.) Data refer to the year 1904.
- Employees and wages,* by Davis R. Dewey. Special report of the Twelfth Census—"The Dewey Report." Classified wages data based on censuses of 1890 and 1900.
- Report on the statistics of wages in the manufacturing industries,* by Joseph D. Weeks—"The Weeks Report."
- Survey of Current Business.* Compiled and published monthly by the Bureau of the Census, the Bureau of Foreign and Domestic Commerce, and the Bureau of Standards.
- Census wage statistics and number of persons employed,* by M. O. Lorenz. Unpublished manuscript in files of the Bureau of the Census. (Dated June, 1910.)

BUREAU OF LABOR STATISTICS:

- Prices and the cost of living.* Monthly reports. Published also in the *Monthly Labor Review*.
- Employment in selected industries.* Monthly reports, 1915-1926. Published also in the *Monthly Labor Review*.
- Series of bulletins on *Wages and hours of labor.*
- Cost of living in the United States.* Bulletin 357.
- Industrial survey in selected industries, 1919.* Bulletin 265.
- Industrial unemployment.* Bulletin 310.
- The making and using of index numbers,* by Wesley C. Mitchell (Part I of Bulletin 284: *Index numbers of wholesale prices in the United States and foreign countries*).
- Standardization of industrial accident statistics.* Bulletin 276.

CONGRESS:

- Hearings before Committee on Labor on H. R. 11956,* June 30, 1922 (67th Cong., 2d sess.). Reprint of a report on the relations between wages and production, prepared for the International Association of Machinists by The Labor Bureau, Inc., pp. 13-70.
- Congressional Record,* vol. 41, pp. 5488-5489 (August 16, 1921). U. S. Bureau of Labor Statistics monthly index numbers of employees on pay roll, January, 1915-May, 1921, for 13 industries.
- Senate Executive Document No. 39* (35th Cong., 2d sess., March, 1859). Contains the report on manufactures of the census of 1850.
- Senate Report No. 1394,* by Mr. Aldrich, Senate Committee on Finance, March 3, 1893. *Wholesale prices, wages, and transportation.* "The Aldrich Report." Pay roll data, 1840-1891.

FEDERAL RESERVE BANK OF NEW YORK:

- Monthly series of chain relatives of average weekly earnings, 1915-1924, separately reported for each of 13 industries (unpublished). Based upon changes in per capita earnings reported by the U. S. Bureau of Labor Statistics.

STATE REPORTS

- CONNECTICUT, Bureau of Labor Statistics. *Annual Reports*.
- IOWA, Bureau of Labor Statistics. *Annual Reports*.
- MASSACHUSETTS, Department of Labor and Industries. *Annual Statistics of Manufactures and Massachusetts Industrial Review*.
- NEW JERSEY, Bureau of Labor Statistics. *Annual Reports*.
- NEW YORK, Bureau of Labor Statistics. *Annual reports on statistics of unemployment among members of trade-unions, 1899-1914*.
- Department of Labor (superseding the Bureau of Labor Statistics) *Annual Reports*.
- , — *The Industrial Bulletin* (monthly). Monthly series of data on factory employment, average weekly earnings in factories, time lost, and overtime, etc.
- , — *Course of employment in New York State from 1914 to 1921*. Special Bulletin No. 113, September, 1922.
- WISCONSIN, Industrial Commission. *The Wisconsin Labor Market* (monthly).

B. UNOFFICIAL

- BARNETT, GEORGE E. "Growth of labor organization in the United States." 30 *Quarterly Journal of Economics*, 838 (October, 1916), and 12 *American Economic Review*, 44-55 (Supplement, March, 1922)
- BERRIDGE, W. A. "Industrial employment in the present business cycle." *Review of Economic Statistics*. Prel. Vol. V, pp. 292-300. (October, 1923.)
- Business cycles and unemployment*. Reports and recommendations of a Committee of the President's Conference on Unemployment, including an investigation made under the auspices of the National Bureau of Economic Research. New York: McGraw-Hill, 1923.
- COOMBS, WHITNEY. *Wages of unskilled labor in manufacturing industries in the United States, 1890-1924*. New York: Columbia University Press, 1926. 163 pp. (Studies in History, Economics, and Public Law, No. 283.)
- DAY, EDMUND E. "Cyclical fluctuations in the volume of manufacture." *Review of Economic Statistics*. Prel. Vol. V, pp. 30-60 (January, 1923), and continuation of the same series in subsequent issues of the *Review* and of the *Weekly Letter* of the Harvard University Committee on Economic Research.
- "An index of the physical volume of production." *Review of Economic Statistics*, September, 1920, and January, 1921.
- DOUGLAS, PAUL H. "The movement of real wages and its economic significance" 16 *American Economic Review*, Supplement, pp. 17-53 (March, 1926).
- *Real wages*. Pollak Foundation for Economic Research. (In press.)
- DOUGLAS, PAUL H., and LAMBERSON, FRANCES. "The movement of real wages, 1890-1918." 11 *American Economic Review*, 409-26 (September, 1921). Continuation of I. M. Rubinow's consolidation of statistics of wages and hours of labor published by the United States Bureau of Labor Statistics. *American Economic Review*, December, 1914.
- HART, HORNELL. Fluctuations in employment in cities of the United States, 1902-1917. (Pamphlet.) Studies from the Helen S. Trounstine Foundation Vol. I, No. 2, May 15, 1918). Cincinnati, 1918. pp. 47-59.
- HARVARD UNIVERSITY, Committee on Economic Research. E. E. Day's index of the physical volume of production, in *Review of Economic Statistics*, 1920-1925, and *Weekly Letter* of the Harvard Economic Service, 1924-25.
- JAMES, A. E. "The Dewey report on wages in manufacturing industries in the United States." Publication of the *American Statistical Association*, vol. 10. (September, 1907), pp. 319-44. The author combines the data for the 33 industries separately presented in the Dewey report on *Employees and Wages*, giving a weighted summary for all industries. The article contains a critical review of the Dewey report. Mr. James's results tally closely, but not exactly, with those obtained by Mr. H. L. Moore after a similar analysis.

- KING, WILLFORD I. *Employment, hours, and earnings in prosperity and depression.* New York: *National Bureau of Economic Research.* 1923. "The results of an inquiry conducted by the National Bureau of Economic Research with the help of the Bureau of Markets and Crop Estimates of the United States Department of Agriculture and the Bureau of the Census of the United States Department of Commerce for the President's Conference on Unemployment."
- MITCHELL, WESLEY C. "Methods of presenting statistics of wages." 9 *Quarterly Publication of the American Statistical Association* 325-43 (December, 1905).
- MOORE, HENRY L. "The variability of wages." 22 *Political Science Quarterly* 62-73 (March, 1907). A summation and consolidation of the data in the Dewey report on *Employees and Wages.*
- NATIONAL BUREAU OF ECONOMIC RESEARCH. *Employment, hours, and earnings in prosperity and depression.* New York, 1923.
- *Growth of American trade unions, 1880-1923.* New York, 1924.
- *Income in the United States, its amount and distribution, 1909-1919.* Vol. I, summary. New York: Harcourt, Brace & Co., 1921.
- *Income in the United States, its amount and distribution, 1909-1919.* Vol. II. New York: National Bureau of Economics Research, 1922.
- *Income in the various States, its sources and distribution, 1919, 1920, and 1921.* New York: National Bureau of Economics Research, 1925.
- NATIONAL INDUSTRIAL CONFERENCE BOARD. *Wages, hours, and employment in American manufacturing industries, July, 1914-January, 1924* (Research Report No. 69), New York, 1924.
- RUBINOW, I. M. "The recent trend of real wages." 4 *American Economic Review*, 810 (December, 1914.) An analysis and consolidation of statistics of wages and hours of labor published by the United States Bureau of Labor Statistics

APPENDIX V

RETURNS FROM 1927 MANUFACTURES CENSUS

INDUSTRY	Wage earners (average number)	Wages	Census average wage ¹
All manufacturing industries.....	8,353,977	\$10,848,802,532	\$1,290
Bread and other bakery products.....	171,665	236,225,862	1,373
Flour-mill and gristmill products.....	29,982	37,559,472	1,253
Confectionery.....	63,163	56,980,543	902
Slaughtering and meat packing.....	119,095	161,583,827	1,357
Liquors, malt ²	26,972	36,100,934	1,338
Mineral and soda waters ²			
Tobacco, cigars, and cigarettes.....	116,174	94,589,211	814
Carpets and rugs, other than rag.....	32,829	42,040,892	1,281
Shirts.....	57,215	42,987,827	752
Clothing, men's ³	146,099	184,613,090	1,264
Clothing, women's.....	154,459	211,349,759	1,369
Cotton manufactures.....	467,596	380,909,543	815
Dyeing and finishing textiles, exclusive of that done in textile mills.....	73,851	91,697,219	1,242
Knit goods.....	190,283	188,163,468	989
Silk goods, including throwsters.....	127,643	140,653,888	1,067
Woolen and worsted goods.....	154,361	173,821,905	1,126
Boots and shoes, not including rubber boots and shoes.....	203,110	225,090,242	1,108
Leather, tanned, curried, and finished.....	52,924	67,887,231	1,283
Furniture.....	180,302	236,109,312	1,267
Lumber and timber products.....	418,168	413,361,954	989
Lumber, planing-mill products, not including planing mills connected with sawmills.....	90,589	126,139,713	1,396
Paper and wood pulp.....	123,360	162,002,097	1,313
Printing and publishing, book and job.....	141,278	240,392,870	1,702
Printing and publishing, newspapers and periodicals.....	110,399	231,150,633	1,930
Chemicals.....	50,510	75,261,188	1,490
Petroleum refining.....	71,234	113,716,705	1,596
Brick and tile, terra cotta, and fire-clay products.....	137,639	167,117,325	1,214
Glass.....	65,825	81,352,734	1,236
Iron and steel, blast furnaces.....	27,058	44,258,400	1,583
Iron and steel, steel works, and rolling mills.....	361,312	601,275,499	1,664
Foundry and machine-shop products.....	397,814	591,064,948	1,486
Smelting and refining, copper, lead, and zinc.....	30,510	44,799,809	1,468
Automobile bodies and parts.....	181,489	291,290,968	1,605
Automobiles.....	187,910	321,664,093	1,712
Cars, steam-railroad, not including operations of railroad companies ⁴	38,031	60,024,856	1,594
Electric-railroad repair shops.....	31,684	48,391,807	1,532
Steam-railroad repair shops.....	397,088	600,516,555	1,512
Agricultural implements.....	33,246	46,415,450	1,392
Rubber goods, not elsewhere specified.....	36,893	45,930,934	1,245
Shipbuilding, steel ⁵	55,014	87,081,444	1,583
Electrical machinery, apparatus, and supplies.....	241,566	336,238,750	1,392

¹ See initial paragraph on page 209.

² Reported as "Beverages."

³ Includes work clothing.

⁴ Includes electric-railroad cars.

⁵ Includes wooden shipbuilding.